FACT SHEET

FIRST FIVE-YEAR REVIEW REPORT
CONTINENTAL STEEL SUPERFUND SITE
KOKOMO, HOWARD COUNTY, INDIANA
Superfund program review of past and future remedial actions.

More information about the Superfund Process

YOU ARE INVITED TO A PUBLIC AVAILABILITY SESSION !

DATE: **June 13, 2002**

TIME: **1:00 until 3:00 p.m. and 6:00 until 8:00 p.m.**

Place: **Rogers Pavilion, Highland Park**
902 W. Defenbaugh Street
Kokomo, Indiana

IDEM representatives will discuss site background, past and future remedial actions and the Five Year review process. Community members are invited to express their opinions as part of this review. Oral and written comments will be taken during the public availability sessions.

Table of Contents

What's Been Done?

- Interim Closure of Acid Lagoon Area
- Removal Actions at Markland Quarry, Acid Lagoon Area and Main Plant
- Removal of lead-contaminated residential soil
- Decontamination and demolition of Main Plant Buildings

IDEM and EPA are currently designing the Future Remedial Actions that were selected in 1998 to address contamination that remains in soil, sediments, surface water and groundwater in all areas of the site. The figure at the end of this Fact Sheet will help identify the different areas of the site.

I. Introduction

The Continental Steel Superfund Site (CSSS) is located on West Markland Avenue in Kokomo, Indiana. Continental Steel was built in 1914. The total site covers 183 acres and includes an abandoned steel manufacturing facility. The plant produced nails, wire, and wire fence from scrap metal. Operations included reheating, casting, rolling, drawing, pickling, annealing, hot-dip galvanizing, tinning, and oil tempering. The steel manufacturing operations at the plant included the use, handling, treatment, storage, and disposal of hazardous materials. Continental Steel operated until 1986, when the company entered into bankruptcy. The area surrounding the facility is mixed residential, commercial, and industrial use and is zoned for general use, except for the Main Plant and the Acid Lagoon Area, which have industrial-use-only deed covenants.

Continental Steel was placed on the National Priorities List (NPL), also known as the Superfund list, in 1989.

II. Basis for Taking Action

The Indiana Department of Environmental Management (IDEM) performed an investigation at the site. The investigation indicated the presence of various contaminants above the acceptable risk ranges established in the National Contingency Plan (NCP); 40 CFR 300.430(e)(2)(I)(A). Based on the results of that investigation, IDEM and the U.S. Environmental Protection Agency (EPA) concluded that CSSS poses potential long-term risks to human health and the environment. This determination was documented in the Record of Decision, signed by IDEM and EPA on September 30, 1998. There are no viable Potentially Responsible Parties, so the remedy is being funded by the Superfund Trust Fund through EPA. A 10% cost share is paid from the Indiana Hazardous Substances Response Trust Fund by the State of Indiana.

III. The Five-Year Review

IDEM is conducting a Five-Year Review of the remedy. This is the first Five-Year Review for CSSS. The review is required because:

(1) Some cleanup actions have been completed; and
(2) hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure.

The review looks at past and future actions. The purpose of the review is to determine if the remedy is protective of human health and the environment. The methods, findings, and conclusions of the review will be documented in a Five-Year Review report. In addition, the report will identify issues found during the review, and make recommendations to address them.

IDEM is preparing this Five-Year Review report pursuant to the Comprehensive Environmental Response, Compensation and Liabilities Act (CERCLA) Subsection 121 and the National Contingency Plan (NCP). CERCLA Subsection 121 states:

> *If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such*

> *remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgement of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.*

The NCP; 40 CFR 300.430(f)(4)(ii) that states:

> *If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.*

The review will address the following questions:

- Is the remedy functioning as intended by the decision documents?
- Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?
- Has any other information come to light that could call into question the protectiveness of the remedy?

The Five-Year Review includes:

- Community Involvement;
- Data and Document Review;
- Site Inspection; and
- Five-Year Review Report Development.

The review will include information gained from members of the community during individual interviews and the June 13, 2002, public availability sessions.

IDEM will review documents including the Baseline Risk Assessment, the Non-time Critical Removal Action (NCRA) Remediation Completion Report, and data collected in the Summer of 2001 for the pre-design investigation. Ground water cleanup standards that were listed in the 1998 Record of Decision will be reviewed. Inspections of the site were conducted on April 15, 16 and 17, 2002.

IV. History of Contamination

Markland Quarry. The Markland Avenue Quarry is a former limestone quarry that was purchased in 1947 and used until the early 1980s by Continental Steel for the disposal of waste materials from steel processing operations. The quarry is approximately 23 acres in size, and is bordered to the north by Harrison Street, to the south by West Markland Avenue, to the east by Courtland Avenue, and to the west by Brandon Street . Apparently, near-empty drums were taken to the quarry and the remaining contents dumped onto the ground. Most of the quarry has been backfilled with slag, refractory brick, pig iron, baghouse dust, and possibly drums. Previous investigations identified more than 400 drums, several tanks and other waste materials scattered across the

property. Drums that contained oils, solvents, and refuse, were disposed in the quarry pond. EPA removed many drums in 1990. The quarry is overgrown with shrubs and trees and is currently fenced. The quarry pond is mostly filled with water. *Contaminants in the surface water, groundwater and soil still pose risks in this area that are to be addressed during the Final Remedial Action.*

Main Plant. The Main Plant is bordered by West Markland Avenue to the north, Leeds Street to the east, and Park Avenue to the west, and extends west of Park Avenue to Wildcat Creek. The Main Plant included many abandoned buildings with basements, sewers, and utility lines. Previous investigations identified more than 700 oil and solvent-filled drums scattered throughout the Main Plant, 55 aboveground and underground storage tanks (ASTs/USTs) and 33 vats. Tanks and vats contained primarily oil and some chlorinated solvents and acids. Electrical transformers, capacitors, electric arc furnace dust (baghouse dust), and exposed asbestos were also found at the Main Plant. *Although the buildings were removed, contaminated soil and groundwater remain to be addressed by the Final Remedial Action.*

Acid Lagoon Area. The Acid Lagoon Area is located approximately 0.3 miles west of the Main Plant along the south side of West Markland Avenue. The area covers approximately 56 acres and is composed of 10 lagoons that formerly received spent pickling and finishing liquors from the Main Plant. The area is bordered on the south and west by Wildcat Creek and to the east by the City of Kokomo wastewater treatment plant. Currently, the perimeter of the Lagoon Area is fenced. The lagoons now retain surface water runoff from rainfall. *Contaminated groundwater, soil and sediment remain at the site, and the former wastewater treatment building contains exposed asbestos.*

Slag Processing Area. Slag generated from Continental Steel operations was processed and disposed in this area along West Markland Avenue approximately 0.2 miles west of the Lagoon Area. The area consists of approximately nine acres and is bounded to the north by West Markland Avenue, to the south and west by Wildcat Creek, and to the east by the Lagoon Area. Slag processing apparently involved the reclamation of metals from the slag. An undetermined amount of slag was placed in this area. The slag consisted primarily of calcium and iron oxides with some aluminum, chromium, lead, manganese, magnesium, and zinc oxides. Slag may also have been contaminated with oils and solvents. A portion of the Slag Processing Area was formerly known as the Chaffin Quarry. The Chaffin Quarry may also have been used to dispose waste materials (i.e., drums) from the Main Plant. Currently the Slag Processing Area is unfenced and contains exposed slag. The area also contains a stockpile of soil that was removed from residential properties. This soil is acceptable for use in industrial areas. *Risks posed by direct contact with the slag and soil are to be addressed during the Final Remedial Action.*

Groundwater. Groundwater beneath CSSS appears to have received contaminants from the Main Plant, the Markland Avenue Quarry, the Lagoon

Area, other areas related to the site and possibly from other industrial facilities. *Groundwater in the affected area is not suitable for drinking.*

Kokomo and Wildcat Creeks. Kokomo and Wildcat Creeks run along the borders of the Main Plant and the Acid Lagoon Area. The creeks have received water from the plant's wastewater recycling and filtration system, neutralized pickle liquor from the Acid Lagoon Area, discharge from site outfalls, and stormwater runoff from the site. *Contaminated sediment in the creeks is to be removed during the Final Remedial Action.*

V. Initial Response Actions

RCRA Closure 1989-1990. IDEM performed the interim Resource Conservation and Recovery Act (RCRA) closure action that involved neutralization of waste sulfuric acid stored in open lagoons in the Acid Lagoon Area, and placement of neutralized sludge back into the lagoons.

Immediate Removal Actions 1990 - 1994. EPA began removal actions at the Main Plant and Markland Avenue Quarry in February 1990. Drums at the quarry and Main Plant were collected, staged, analyzed, and disposed. Capacitors and transformers were removed. Some tank liquids were analyzed and disposed, and seven underground storage tanks were removed. Various chemicals were removed from a laboratory facility at the Main Plant. Surface soil contaminated with polychlorinated biphenyls (PCBs) was removed from the former drum staging area at the Markland Quarry. Surface drums were over-packed, sampled, and disposed. A berm was also constructed.

In May 1990, EPA staged and sampled drums at the Main Plant. Samples of tank content were collected and the liquids removed and disposed. Capacitor and transformer oils were analyzed, and the units were drained and disposed.

In August 1993, the Main Plant area was sampled for PCBs, polycyclic aromatic hydrocarbons (PAHs), asbestos and lead. Approximately 90 cubic yards of lead-contaminated dust were consolidated, containerized, and stored on-site. Lead-contaminated debris was separated, stockpiled and covered for future disposal. Lead was removed from several of the buildings. Asbestos was identified in the buildings. EPA sampled sewers and drained acid from tank T-18. The acid was disposed off-site.

In October 1993, one cubic yard of PCB-contaminated soil was excavated from the western portion of the Main Plant and disposed off-site. Various drums collected throughout the site from previous removal efforts were disposed off-site.

In the Fall of 1994, EPA removed contents and cleaned several above ground storage tanks, and others were emptied but not cleaned.

Non-time Critical Removal Action - Residential Soil Removal Action 1998 - 1999. To address the threat to human health posed by lead-contaminated residential soils, a Non-time Critical Removal Action (NCRA) was performed. Contaminated surface soil

was excavated and placed in an off-site landfill. Soil suitable for industrial use was stockpiled in the Slag Processing Area. The yards were then backfilled with clean soil and restored with sod or other material, and shrubs were replaced. The volume of material that was excavated from the residential area was approximately 14,700 cubic yards.

Interim Remedial Action - Decontamination and Demolition of Main Plant Buildings, 1999 - 2000.
IDEM performed an investigation of the Main Plant Area in 1995. The investigation determined that the buildings presented a potential risk to nearby residents and trespassers. An Interim Risk Assessment/Feasibility Study for the Main Plant Buildings was performed in 1996 and an Interim Proposed Plan was developed. The Interim Proposed Plan recommended that the buildings be decontaminated and demolished. The proposed plan was presented to the public in March 1996, and the Interim Record of Decision was signed in September 1996. The selected interim remedy included:

- Gross removal of lead dust from contaminated building interiors;
- Management and proper disposal of decontamination rinse water;
- Removal of exposed friable asbestos-containing material and disposal at a permitted facility;
- Sampling to confirm decontamination;
- Removal of PCB-contaminated wood block floors and disposal as hazardous waste;
- Demolition of buildings, tanks, and equipment;
- Salvaging of structural steel as scrap;
- Disposal of all debris and demolition rubble as indicated by waste characterization;
- Dust control during demolition;
- Pumping, removal of equipment and residue; and filling of basements;
- Filling or covering of pits;
- Finishing of unpaved areas with crushed stone; and
- Securing of the site.

VI. Final Remedial Action

The final Remedial Action (RA) will address contamination that remains in all areas of the site. A Proposed Plan was presented to the public in March 1997, and the RA selection was documented in the Record of Decision signed by IDEM and EPA on September 30, 1998. No final remedial actions have been completed.

The RA is currently in the Remedial Design (RD) phase. Detailed plans and cost estimates are developed during this phase. The RA is tentatively scheduled (pending the availability of funds) to begin in 2003, and will include:

- Excavation of contaminated soils and sediment;
- Containment of contaminated soils and sediments in a Corrective Action Management Unit (CAMU) on site;
- Capping;
- Institutional controls;
- Treatment of shallow and intermediate groundwater; and
- Monitored natural attenuation of contaminated groundwater in the deep aquifer.

VII. Table 1 - Chronology of Site Events

March, 1989	Based on preliminary investigations, Lagoon Area placed on the NPL. The Main Plant and the Markland Quarry were added shortly thereafter.
August 1989	EPA Technical Action Team inspected site for possible removal actions.
October 1989	IDEM contractor began removing and disposing of pickle liquor from the Lagoon Area. Lime was added to the pickle liquor to achieve a uniform pH. Treated liquor was then discharged to the Kokomo treatment plant.
February 1990	EPA began removing surface drums from Markland Avenue Quarry. A berm was constructed to inhibit off-site migration of contaminated water.
March 1990	EPA and IDEM inspected Main Plant for possible removal actions.
April 1990	EPA conducted an underwater investigation of Markland Avenue Quarry. Roughly 1,000 drums were found. Sampling was conducted.
May 1990	EPA removed drums, tank contents, capacitors and transformers from Main Plant. Removed over 200 chemicals from metallurgical lab. Drum disposal was on-going.
June 1990	The IDEM contractor completed treatment and discharge of pickle liquor in Lagoon Area.
November 1990	IDEM conducted preliminary assessment of Dixon Road Quarry. The assessment indicated potential contamination.
June 1991	EPA began removal of over 1,100 submerged drums from Markland Avenue Quarry Pond.
May 1992	Some EPA TCRAS completed. Community interviews conducted to develop a Community Relations Plan.
December 1992-February 1993	An estimated 1350 buried drums and 1250 cubic yards of contaminated soil were removed from the bank of Wildcat Creek at the Lagoon Area.
August 1993	Main Plant sampled for PCBs, PAHs asbestos, and lead. Approximately 90 cubic yards of lead-contaminated dust consolidated and contained on site. Hundreds of cubic yards of lead-contaminated debris separated, stockpiled and covered for future disposal. Lead removed from the buildings. Asbestos presence confirmed. EPA sampled sewers and drained acid from tank T-18. Acid later disposed off-site.
October 1993	About 121 cubic yards of PCB contaminated soil excavated from western portion of Plant area, disposed off-site. Drums collected throughout site during the 1993 removal were stored and later disposed off-site.
1993	Phase I of Remedial Investigation completed. (Lagoon Area, Wildcat and Kokomo Creeks, site-wide groundwater).
Fall 1994	US EPA removed contents and cleaned above ground storage tanks in Main Plant. Tanks T-14 and T-15 emptied but not cleaned.
December 1994	IDEM reported to EPA that one residential well had been contaminated by Trichlorethelene (TCE).

March 1995	EPA installed an air stripper on the residential well.
1995	Phase II of Remedial Investigation completed (Markland Avenue Quarry, Main Plant, Slag Processing Area and data gaps for Phase I with regard to site-wide groundwater, the Lagoon Area and the creeks.
June 1996	Indiana State Department of Health performed environmental radiation surveys in Slag Processing Area, Lagoon Area, and the former laboratory area in the Main Plan. No evidence of gross radiological contamination.
September 1996	**Interim Record of Decision signed by IDEM and EPA to decontaminate and demolish buildings in Main Plant area.**
July 1997	IDEM proposed removal of lead contaminated soils from residential yards east of the Main Plant.
April 1997	**Action Memorandum determines need to remove contaminated soils in residential area. Final Proposed Plan presented to the National Remedy Review Board for approval.**
February 1998 to March 1998	First public comment period for the Final Record of Decision for all six Operable Units.
April 1998 to May 1998	Second public comment period for final Record of Decision for all six Operable Units.
May 5, 1998	Removal of residential soils began.
September 1998	**Final Record of Decision signed for all six Operable Units. Marks completion of investigation and describes cleanup actions.**
December 1998	Removal of lead contaminated residential soils completed.
April 1999	IDEM began decontamination and demolition of Main Plant buildings with asbestos survey.
December 28, 2000	IDEM completed decontamination and demolition of Main Plant buildings.

VIII. ACRONYMS

AST	Aboveground Storage Tank
ATSDR	Agency for Toxic Substances and Disease Registry
BRA	Baseline Risk Assessment
CAMU	Corrective Action Management Unit (landfill)
CERCLA	Comprehensive Environmental Response, Compensation and Liabilities Act
CSSS	Continental Steel Superfund Site
EPA	U.S. Environmental Protection Agency
IDEM	Indiana Department of Environmental Management
IRA	Interim Remedial Action
NCP	National Contingency Plan
NCRA	Non-time Critical Removal Action
PAHs	Poly-Aromatic Hydrocarbons
PCBs	Poly-Chlorinated biphenyls
RA	Remedial Action
RCRA	Resource Conservation and Recovery Act

RD	Remedial Design
RD/RA	Remedial Design/Remedial Action
RI	Remedial Investigation
ROD	Record of Decision
TCE	Trichlorethelene
TCRA	Time Critical Removal Action
UST	Underground Storage Tank

IX. FOR MORE INFORMATION!!

Anyone interested in learning more about the Remedial Investigation, the Five Year Review or the Superfund process is encouraged to review other documents related to the site. An administrative record, including the information IDEM relied upon to choose the cleanup actions is also available in the **Information Repository** located at:

Information Repository
Kokomo/Howard County Public Library
Genealogy Section
220 North Union Street
Kokomo, IN

A copy of this information is also kept in the IDEM public file room which is located at:
Indiana Government Center – North
Room N-1255
100 North Senate Avenue
Indianapolis, IN 46204

Media inquiries should be directed to:
Susan Gross, Coordinator
Office of Media and Communication Services
100 North Senate Avenue IGC-N
P.O. Box 6015
Indianapolis, IN 46206-6015
IDEM's toll-free number: 1-800-451-6027

ADA Information
Individuals requiring reasonable accommodations for participation at the public meeting should contact the IDEM Americans with Disabilities Act coordinator at:

ATTN: Carla Poe, ADA Coordinator
Indiana Department of Environmental Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

Or call (317) 233-0544(V) or (317) 233-6087(TT)
Please provide a minimum of 72 hours notification.

CONTINENTAL STEEL SUPERFUND SITE, KOKOMO, INDIANA